

GAMOCHAETA COARCTATA, THE CORRECT NAME FOR GAMOCHAETA SPICATA (ASTERACEAE: GNAPHALIEAE)

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ABSTRACT

Gamochaeta spicata "(Lam.) Cabr." is based on an illegitimate later homonym (*Gnaphalium spicatum* Lam. 1788, non P. Miller 1768) and is to be attributed as *Gamochaeta spicata* Cabr., nom. nov. Cabrera's "nomen novum," however, also is illegitimate because *Gnaphalium coarctatum* Willd., a replacement name for *Gnaphalium spicatum* Lam., is the first legitimate name for Lamarck's plant. Details in the publication and specimen citations are clarified for the typification of **Gamochaeta coarctata** (Willd.) Kerg., the correct name in *Gamochaeta* for this species. *Gnaphalium spicatum* P. Miller is a synonym of *Pterocaulon virgatum* (L.) DC. *Gnaphalium spicatum* (Forssk.) Vahl is a synonym of *Ifloga spicata* (Forssk.) Sch. Bip.

RESUMEN

Gamochaeta spicata "(Lam.) Cabr." está basado en un homónimo posterior ilegítimo (*Gnaphalium spicatum* Lam. 1788, non P. Miller 1768) y debe consignarse como *Gamochaeta spicata* Cabr., nom. nov. El "nomen novum" de Cabrera, sin embargo, es también ilegítimo ya que *Gnaphalium coarctatum* Willd., un nombre reemplazo de *Gnaphalium spicatum* Lam., es el primer nombre legítimo para la planta de Lamarck. Para la clarificación de la tipificación de **Gamochaeta coarctata** (Willd.) Kerg., el nombre correcto en *Gamochaeta* de esta especie, se brindan detalles acerca de la publicación y citación de los especímenes. *Gnaphalium spicatum* P. Miller es un sinónimo de *Pterocaulon virgatum* (L.) DC. *Gnaphalium spicatum* (Forssk.) Vahl es sinónimo de *Ifloga spicata* (Forssk.) Sch. Bip.

During work preliminary to treatments for *Flora Mesoamericana* and *Flora of North America*, we noted that the species previously identified as *Gamochaeta* (*Gnaphalium*) *spicata* (Lam.) Cabr. (Compositae: Gnaphalieae) should be called *Gamochaeta coarctata* (Willd.) Kerg. Kerguélen's combination (1987) was made preliminary to the Flora of France, after *Flora Europaea* (Holub in Tutin et al. 1976), and it has not been widely used. For example, *Gamochaeta spicata* was used in Freire (1995), but *Gamochaeta coarctata* was correctly used subsequently by Freire & Iharlegui (1997) and Cabrera et al. (2000). Typification of *Gamochaeta coarctata*, however, has been confused, and because the species is a worldwide weed (e.g., Cabrera 1961; Drury 1971; Kerguélen 1987; Nesom 2004a, 2004b), we provide details of typification necessary for convincing use of the name.

In essence, the name *Gnaphalium spicatum* was validly published by three different authors for three different species from three different continents; these species are now referred to three different genera. *Gnaphalium spicatum* Lam. (1788) is the only one of the three that refers to a *Gamochaeta* species. It was used as a legitimate name by Cabrera (1961), but it is an illegitimate later hom-

onym of *Gnaphalium spicatum* P. Mill. (1768). Vahl's combination (1790), based on *Chrysocoma spicata* Forssk., added the third *Gnaphalium spicatum*. Willdenow (1803) provided a replacement name (*Gnaphalium coarctatum*) for Lamarck's (1788) illegitimate *Gnaphalium spicatum*. Cabrera (1961) resurrected *Gamochaeta* from synonymy within *Gnaphalium*, but Kerguélen (1987) was the first to correctly use the first legitimate name for Lamarck's type in *Gamochaeta*.

The nomenclature and taxonomy of the three different names *Gnaphalium spicatum* are as follows:

1. *Gnaphalium spicatum* P. Miller, Gard. Dict., ed. 8, *Gnaphalium* no. 24. 1768.

Syntype: JAMAICA: Sloane 38 Volume 5:26 (BM, digital image⁴). It is possible that a Miller collection from the Chelsea Botanic Garden, England is preserved in the Banks herbarium (BM).

Current name.—*Pterocaulon virgatum* (L.) DC.

Distribution.—southern United States to South America (Cabrera & Ragonese 1978).

Miller's protologue reads "24 *Gnaphalium (spicatum)* foliis lanceolatis decurrentibus tomentosis, floribus spicatis terminalibus lateralibusque." Additionally, Miller (1768) cited "Elichrysum caule alato, floribus apicatis. Sloan. Cat. Jam. 125," in direct reference to Sloane's polynomial "Helichrysum caule alato, floribus spicatis" (Sloane, 1696:125) as illustrated in Sloane (1707:tab. 152, fig. 50). Miller stated that the plant "grows naturally in Jamaica, and in other of the hot parts of America" and that it "flowers in July and August, but never perfectly sets seed in England."

Gnaphalium spicatum P. Miller, was not cited in the monograph of *Pterocaulon* (Cabrera & Ragonese 1978) but was listed by Jackson (1893) as a synonym of *Pterocaulon virgatum* (L.) DC. Based on our observation of the Sloane syntype (BM) of *Gnaphalium spicatum* P. Miller, of the cited original illustration (Sloane 1707) of *Gnaphalium spicatum* P. Miller, and of the lectotype of *Gnaphalium virgatum* L. (LINN 993.29, IDC microfiche 177. 578.II.5!), we treat *Gnaphalium spicatum* P. Miller as a synonym of *Pterocaulon virgatum* (L.) DC.

2. *Gnaphalium spicatum* (Forssk.) Vahl, Symb. Bot. 1:70. 1790, hom. illegit., non P. Miller 1768. *Chrysocoma spicata* Forssk., Fl. Aegypt. 73. 1775. *Ifloga spicata* (Forssk.) Schultz-Bip. in Webb & Berthelot, Hist. Nat. Iles Canaries, vol. 3 (2, sect. 2):310. 1836–1850 [1845]. TYPE EGYPT: 1761–1763, Forsskal s.n. (HOLOTYPE C, IDC 2200 27.III).

Current name.—*Ifloga spicata* (Forssk.) Schultz-Bip.

Distribution.—Canary Islands, northern Africa east to Pakistan (Davis 1975:100–101).

This widespread herb less than 15 centimeters tall with densely crowded and spiralling filiform leaves and axillary capitula was described from Egyptian material. This species was referred to *Gnaphalium* (Vahl 1790) and in turn to *Ifloga* (Schultz-Bipontinus 1844–1850). Davis (1975) and Anderberg (1991) treated this species as *Ifloga spicata* (Forssk.) Schultz-Bip.

3. *Gnaphalium spicatum* Lam., Encycl. Méth. Bot. 2:757. 1788, hom. illegit., non P. Miller 1768. *Gnaphalium coarctatum* Willd., Sp. Pl. 3(3):1886. 1803, nom. nov. *Gnaphalium purpureum* L. var. *spicatum* Klatt, Linnaea 42:140. 1878, nom. et stat. nov. *Gamochaeta spicata* Cabr., Bol. Soc. Argent. 9:380. 1961, nom. illegit. *Gamochaeta coarctata* (Willd.) Kerg., Lejeunea 120:104. 1987. TYPE: URUGUAY. Montevideo, Commerson s.n. [HOLOTYPE: P-LAM, IDC microfiche 6207.325.1.I; possible ISOTYPE: P (photographs Fl, GHI, TEXT; all photographs from C.B.G.N. negative 37573)].

Cabrera (1961:380–381) cited a sheet (“Des environs de Buenos Ayres... *Commerson*”) seen in P as “type” of *Gnaphalium spicatum* Lam. Drury (1971) cited the same sheet as lectotype. The locality on the label of this sheet (Buenos Aires, Argentina) conflicts with that of Lamarck’s protologue (“Monte-video”), and the lectotype selection by Drury is rejected here. Although Montevideo, Uruguay, and Buenos Aires, Argentina, are 200 km apart and on different banks of the Río La Plata, these two sheets are, nevertheless, conceivably of the same gathering. The sheet labeled “Buenos Ayres” is listed here as a possible “isotype” not lectotype.

Current name.—*Gamochaeta coarctata* (Willd.) Kerg.

Distribution.—cosmopolitan weed.

The names listed in the above citation of *Gnaphalium spicatum* Lam. are homotypic. *Gnaphalium coarctatum* Willd. (1803) is treated as having been originally a nomem novum for Lamarck’s plant, and it dates from 1803. In providing a replacement name for Lamarck’s *Gnaphalium spicatum*, Willdenow (1803:1886) cited the locality as “Monte Video” (echoing Lamarck’s citation) for the species. On the same page, Willdenow treated the name *Gnaphalium spicatum* (Forssk.) Vahl as referring to an Egyptian species, citing *Chrysocoma spicata* Forssk. as a synonym (see #2, above). In the *Gnaphalium* treatment, Lamarck (1788) did not specifically refer to the earlier *Gnaphalium spicatum* P. Miller.

Cabrera’s (1961:380) intended transfer of Lamarck’s illegitimate name to *Gamochaeta* (as “*Gamochaeta spicata* (Lam.) comb. nov.”) is to be treated as having been originally a nomem novum. *Gamochaeta spicata* Cabr., however, is illegitimate (vidi ICBN Art. 52.1) because the “available” and legitimate *Gnaphalium coarctatum* should have been adopted. Kerguélen (1987) treated *Gnaphalium coarctatum* and *Gnaphalium spicatum* Lam. as homotypic and supplied the correct (in *Gamochaeta*) combination for this plant.

Gamochaeta spicata was treated as a synonym of *Gamochaeta americana* (P. Miller) Wedd. by Nesom (1990), but *G. coarctata* commonly differs from *G. americana* by stems being up to 60 (vs. to 25) cm tall, basal leaves wider (vs. narrower) than 8 mm, involucres 3–4 (vs. 4.5) mm high, and phyllaries blunt and straight (vs. acute, cuspidate, and reflexed), as noted by Drury (1971).

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